UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

May 23, 2012

REDACTED

Re: EPA's evaluation of two rounds of vapor intrusion data collected on your property at REDACTED (Building # 260504)

Dear REDACTED

EPA has reviewed two rounds of indoor air and subslab soil gas validated data collected from the building on your property at REDACTED , Woburn, MA, in March and June 2011, and two rounds of validated groundwater data collected near your property in August 2010 and April 2011. Our review indicates that **vapor intrusion does not pose a health threat inside the building**. The term "vapor intrusion" refers to the movement of volatile contaminants from groundwater into a structure.

The results of the sampling show that the compound tetrachloroethene (also known as perchloroethylene (PCE)) was detected in indoor air and subslab soil gas samples at low levels that do not pose a health concern.

PCE was also found in groundwater samples collected near your property at levels above the federal drinking water maximum contaminant level (MCL) of 5 ug/L. As a result, EPA is requiring continued annual collection of groundwater samples in designated areas near your property so that EPA can continue to evaluate VOC conditions downgradient of/ near the UniFirst Source Area property. Note that the City of Woburn does not currently use this groundwater for drinking water purposes.

Please find attached three figures and one table. Figure 1 illustrates our vapor intrusion conclusion regarding indoor air samples collected within your building. Figure 2 shows the locations where the two rounds of indoor air and subslab soil gas samples were collected within your building in March and June 2011. Figure 3 shows the flagged monitoring well locations which EPA is requiring annual groundwater monitoring. A table is also attached summarizing the two rounds of validated subslab, indoor air, and outdoor air data collected on your property.

Since 1992, the UniFirst Corporation at the UniFirst Source Area property (15 Olympia Avenue) has been operating a groundwater treatment system that has reduced, and will continue to reduce, PCE concentrations in groundwater. In 2012, UniFirst will initiate a

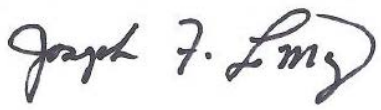
pilot In-Situ Volatilization (ISV) work plan with EPA oversight before designing and implementing a full-scale ISV system to treat VOC contaminated soils, as well as soil gas, (including PCE) on their property.

In addition, if your building stores any products containing volatile compounds such as cleaning products, personal care products, stored solvents/fuels, etc., EPA recommends that you store these products in a separately contained area from the occupied living spaces within the building.

In conclusion, EPA has determined that **vapor intrusion does <u>not</u> pose a health threat inside your building**. Based on groundwater concentrations above the MCL, EPA will require continued annual collection of groundwater samples near your property to evaluate VOC conditions downgradient of/ near the UniFirst Source Area property.

Thank you for your past cooperation and allowing access to your building for the collection of these samples. If you have any questions regarding this letter, or would like to meet and discuss the results, please contact me at (617) 918-1323.

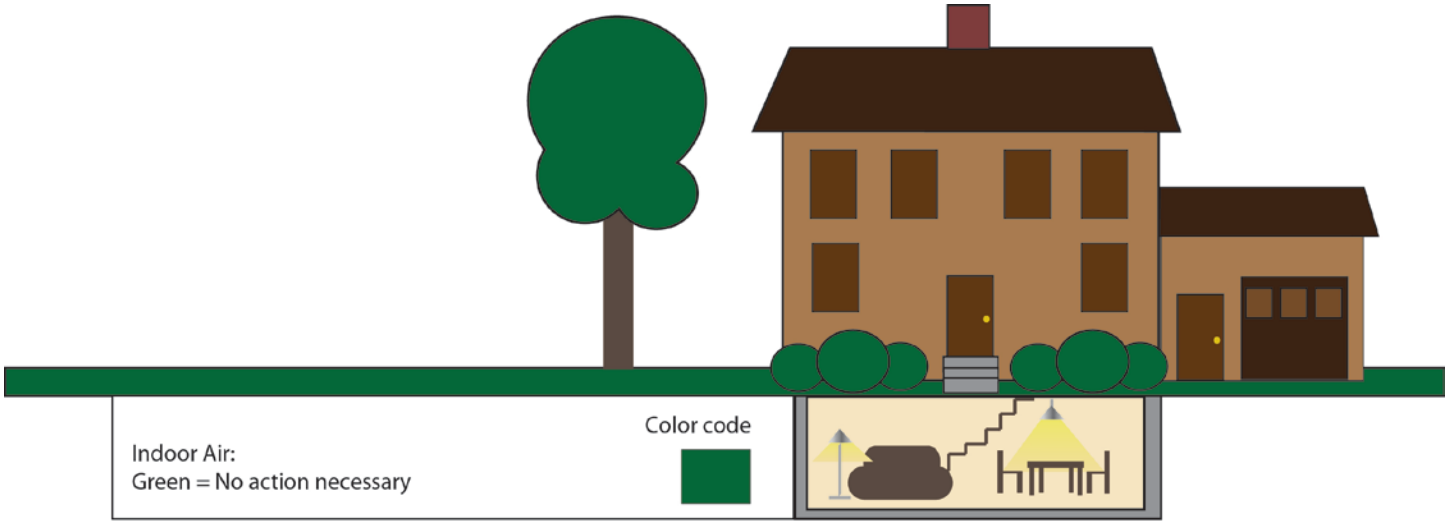
Sincerely,



Joseph F. LeMay, P.E.
Office of Site Remediation and Restoration

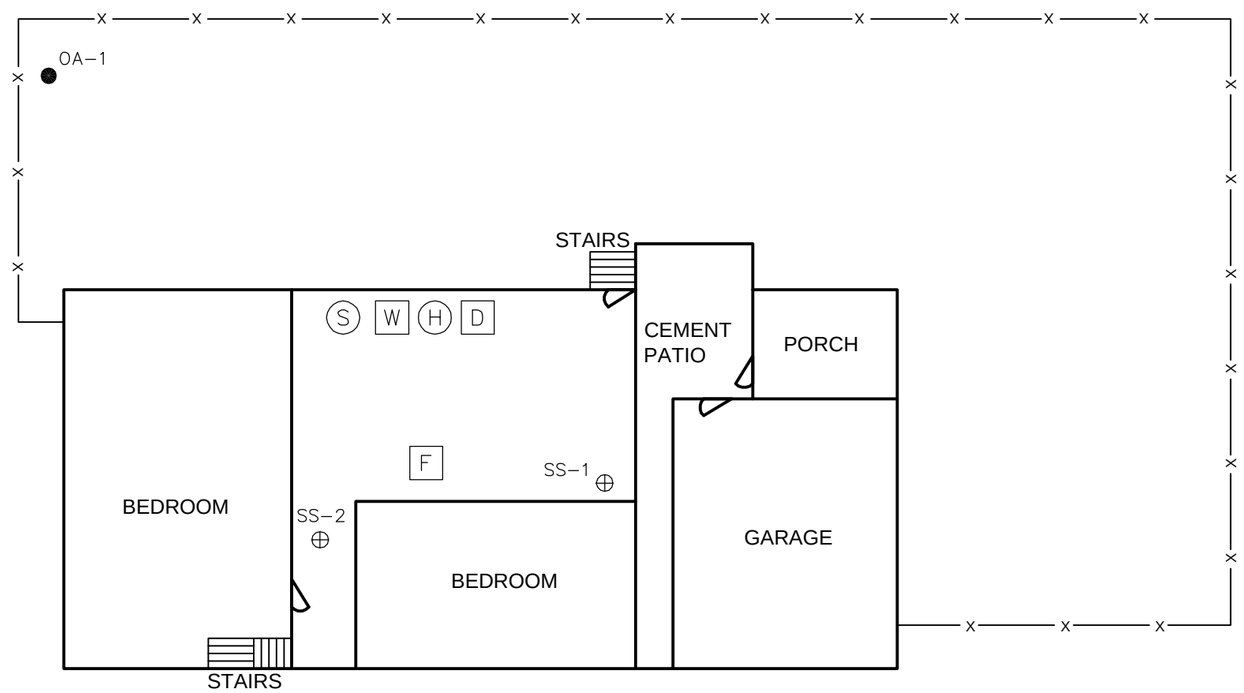
Figure 1 - Residential Property: REDACTED , Woburn, MA

(Building # 260504)



Legend

Location	Contaminant	EPA Vapor Intrusion Evaluation	EPA Action
Indoor Air	PCE	Does not pose a potential health threat	No Action Necessary. EPA will continue to monitor wells in the area (wells are labeled on Figure 3)



LEGEND:

- ⊕ SUB–SLAB AND INDOOR AIR SAMPLING LOCATIONS
- ● OUTDOOR AMBIENT AIR SAMPLING LOCATION
- —x— FENCE
- F FURNACE
- W WASHER
- D DRYER
- H HOT WATER HEATER
- S SEWER

NOTE:

1. ALL LOCATIONS ARE APPROXIMATE.

0 10' 20'

GRAPHIC SCALE

UNIFIRST CORPORATION
WOBURN, MA

INDOOR AIR QUALITY AND VAPOR INTRUSION ASSESSMENT: REPORT OF RESULTS

RESIDENCE SAMPLE LOCATIONS 2011

ARCADIS

FIGURE 2

RAMP-WASHINGTON ST TO RT 95 NB

UC18

UC08

UC05

UC33

UC25

UC29

UC30

UC26

UC07

S71

UC06

UG09

UG10

UG17

UG15

G38

G39

S81

RW10

RW13

RW15

RW17

RW19

RW20

UNIFIRST

15 Olympia Ave

260207

260206

WR GRACE

369 Washington St

OLYMPIA AVENUE

OREGON AVENUE

MARIETTA AVENUE

WAINWRIGHT AVENUE

HOBSON AVENUE

DEWEY AVENUE

WEST CUMMINGS PARK

WASHINGTON STREET

CUMMINGS PARK

CUMMINGS PARK DRIVE

Figure 3. Annual Monitoring

Monitoring Well Locations

Building Footprints

Parcel Lines

UC26 Monitoring Well Locations Identified for Groundwater Annual Monitoring

Building Locations Identified for Indoor Air and Sub Slab Soil Gas Annual Monitoring

Superfund Source Area Property

0 25 50 100

Feet

1 inch = 113 feet

N

Base map: Parcels; MASSGIS

Path: R:\Projects\GIS_2010\104161_WellsGH_Woburn\MXD\GW_NWQuad_Samples_Presentation_052212.mxd

Data Summary Table - Building 260504

Compound	Units	AA1 03/11/11	IA1 03/11/11	IA2 03/11/11	SS1 03/11/11	SS2 03/11/11	IA1 06/17/11	IA2 06/17/11	AA1 06/17/11	SS1 06/17/11	SS2 06/17/11
1,1,1-Trichloroethane	µg/m3	0.109 U	0.109 U	0.109 U	0.801	0.491	0.109 U [0.109 U]	0.109 U	0.109 U	0.153	0.147
1,1,2-Trichloroethane	µg/m3	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U [0.109 U]	0.109 U	0.109 U	0.109 U	0.109 U
1,1-Dichloroethane	µg/m3	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U [0.081 U]	0.081 U	0.081 U	0.081 U	0.081 U
1,1-Dichloroethene	µg/m3	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U [0.079 U]	0.079 U	0.079 U	0.079 U	0.079 U
1,2,4-Trimethylbenzene	µg/m3	0.098 U	3.88	3.32	0.098 U	0.319	1.48 [1.56]	1.26	0.27	0.118	0.192
1,2-Dibromoethane	µg/m3	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U [0.154 U]	0.154 U	0.154 U	0.154 U	0.154 U
1,2-Dichloroethane	µg/m3	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.138 [0.138]	0.13	0.081 U	0.081 U	0.081 U
1,2-Dichloropropane	µg/m3	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U [0.092 U]	0.092 U	0.092 U	0.092 U	0.092 U
1,3-Butadiene	µg/m3	0.044	0.351	0.292	0.044 U	0.069	0.106J [0.108 J]	0.15 J	0.044 UJ	0.044 UJ	0.044 UJ
1,3-Dichlorobenzene	µg/m3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U [0.12 U]	0.12 U	0.12 U	0.12 U	0.12 U
1,4-Dichlorobenzene	µg/m3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.168 [0.12 U]	0.12 U	0.12 U	0.12 U	0.12 U
Benzene	µg/m3	0.405	5.93	5.31	0.223 U	1.34	0.732 [0.767]	0.728	0.316	0.224 U	0.224 U
Bromodichloromethane	µg/m3	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U [0.134 U]	0.134 U	0.134 U	0.134 U	0.134 U
Bromoform	µg/m3	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.207 U [0.207 U]	0.207 U	0.207 U	0.207 U	0.207 U
Carbon Tetrachloride	µg/m3	0.591	0.534	0.49	0.49	0.553	0.447 [0.472]	0.459	0.453	0.377	0.409
Chlorobenzene	µg/m3	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U [0.092 U]	0.092 U	0.092 U	0.092 U	0.092 U
Chloroform	µg/m3	0.098 U	0.507	0.346	0.098 U	0.322	0.591 [0.571]	0.493	0.137	0.195	0.098 U
cis-1,2-Dichloroethene	µg/m3	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U [0.079 U]	0.079 U	0.079 U	0.079 U	0.079 U
Ethylbenzene	µg/m3	0.087 U	2.5	2.4	0.087 U	0.568	0.738J [0.747 J]	0.734 J	0.2 J	0.087 UJ	0.087 UJ
Isopropylbenzene	µg/m3	2.46 U	2.46 U	2.46 U	2.46 U	2.46 U	2.46 U [2.46 U]	2.46 U	2.46 U	2.46 U	2.46 U
Methyl tert-butyl ether	µg/m3	0.072 U	0.072 U	0.072 U	0.072U	0.072 U	0.072 UJ [0.072 UJ]	0.072 UJ	0.072 UJ	0.072 UJ	0.072 UJ
Methylene Chloride	µg/m3	1.74 U	1.74 U	2.5	1.74 U	1.74 U	21.1 J [2.78 J]	1.74 U	1.74 U	1.74 U	1.74 U
Naphthalene	µg/m3	0.262 UJ	0.89 J	0.498 J	0.539 J	0.262 UJ	1.8 J [1.8 J]	1.45 J	0.142 J	0.262 UJ	0.262 UJ
Tetrachloroethene	µg/m3	0.136 U	0.542	0.603	318	178	0.746 [0.841]	0.739	0.136 U	127	84.8
Toluene	µg/m3	0.618	24.8	22.4	0.188 U	3.95	5.28 J [5.54 J]	4.22 J	1.22 J	0.188 UJ	0.241 J
trans-1,2-Dichloroethene	µg/m3	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U [0.079 U]	0.079 U	0.079 U	0.079 U	0.079 U
trans-1,3-Dichloropropene	µg/m3	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U [0.091 U]	0.091 U	0.091 U	0.091 U	0.091 U
Trichloroethene	µg/m3	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U [0.14]	0.107 U	0.107 U	0.107 U	0.107 U
Vinyl Chloride	µg/m3	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U [0.051 U]	0.051 U	0.051 U	0.051 U	0.051 U
Xylenes (total)	µg/m3	0.26 U	14.4	13.4	0.273	1.81	3.09 [3.25]	3.1	0.908	0.261 U	0.36

Notes:
IA = Indoor Air sample
AA = Ambient Air (Outdoor Air) sample
SS = Subslab Soil gas sample
[0.109U] - Duplicate sample results presented in brackets
U - Compound not detected
J - Estimated value
µg/m3 - micrograms per cubic meter